## **AMENDMENTS TO THE CLAIMS**

Claim 1 (previously withdrawn). A composition comprising a compound of Formula I and one or more other organic acids, wherein said compound of Formula I has the following structure:

$$R^1$$
  $S$   $(CH_2)_n$   $OH$ 

wherein R<sup>1</sup> is an alkyl group having from one to four carbon atoms;

n is an integer from 0 to 2;

R<sup>2</sup> is selected from the group consisting of hydroxy, amino,

--OCOR3, or --NHCOR3; and

R<sup>3</sup> is an organic acid derivative;

or a salt thereof;

and an acceptable diluent, adjuvant or excipient.

Claim 2 (previously withdrawn). The composition of claim 1 wherein said organic acid derivative is derived from an organic acid having at least one carboxyl moiety and having a  $pK_a$  of less than about 5.5.

Claim 3 (previously withdrawn). The composition of claim 2 wherein said organic acid derivative is derived from an organic acid selected from the group consisting of formic acid, acetic acid, propionic acid, butyric acid, benzoic acid, lactic acid, malic acid, tartaric acid, mandelic acid, citric acid, fumaric acid, sorbic acid, boric acid, succinic acid, adipic acid, glycolic acid, and glutaric acid, or mixtures thereof.

Claim 4 (previously withdrawn). The composition of claim 3 wherein said other organic acid is an organic acid having at least one carboxyl moiety and having a  $pK_a$  of less than about 5.5.

Claim 5 (previously withdrawn). The composition of claim 4 wherein said other organic acid is selected from the group consisting of formic acid, acetic acid, propionic acid, butyric acid, benzoic acid, lactic acid, malic acid, tartaric acid, mandelic acid, citric acid, fumaric acid, sorbic acid, boric acid, succinic acid, adipic acid, glycolic acid, and glutaric acid, or mixtures thereof.

Claim 6 (previously withdrawn). The composition of claim 5 wherein said compound of Formula I is 2-hydroxy-4-(methylthio)butanoic acid, or a salt, ester or amide thereof.

Claim 7 (previously withdrawn). The composition of claim 6 wherein said other organic acid is selected from the group consisting of formic acid, acetic acid, propionic acid, butyric acid, lactic acid, citric acid, and fumaric acid.

Claim 8 (previously withdrawn). The composition of claim 7 wherein the combined concentration of said compound of Formula I and said other organic acid in said composition is between about 0.1 g/kg and about 50 g/kg.

Claim 9 (previously withdrawn). The composition of claim 8 wherein said combined concentration is between about 0.8 g/kg and about 30 g/kg.

Claim 10 (previously withdrawn). The composition of claim 8 wherein said combined concentration is between about 1 g/kg and about 25 g/kg.

Claim 11 (previously withdrawn). The composition of claim 8 wherein said combined concentration is between about 1 g/kg and about 10 g/kg.

Claim 12 (previously withdrawn). The composition of claim 1 comprising 2-hydroxy-4-(methylthio)butanoic acid, or a salt, ester or amide thereof; and

a first organic acid selected from the group consisting of formic acid, acetic acid, propionic acid, butyric acid, benzoic acid, lactic acid, malic acid, tartaric acid, mandelic acid, citric acid, fumaric acid, sorbic acid, boric acid, succinic acid, adipic acid, glycolic acid, and glutaric acid.

Claim 13 (previously withdrawn). The composition of claim 12 wherein said first organic acid is selected from the group consisting of formic acid, propionic acid, butyric acid, and lactic acid.

Claim 14 (previously withdrawn). The composition of claim 12 further comprising an acidulant selected from the group consisting of mineral acids.

Claim 15 (previously withdrawn). The composition of claim 14 wherein said acidulant is selected from the group consisting of phosphoric acid, sulfuric acid, phosphorous acid, hydrochloric acid, hydrobromic acid, and nitric acid.

Claim 16 (previously withdrawn). The composition of claim 15 further comprising a second organic acid selected from the group consisting of formic acid, acetic acid, propionic acid, butyric acid, benzoic acid, lactic acid, malic acid, tartaric acid, mandelic acid, citric acid, fumaric acid, sorbic acid, boric acid, succinic acid, adipic acid, glycolic acid, and glutaric acid.

Claim 17 (previously withdrawn). The composition of claim 16 wherein said first organic acid and second organic acid are independently selected from the group consisting of formic acid, propionic acid, butyric acid, and lactic acid.

Claim 18 (previously withdrawn). The composition of claim 17 wherein said first organic acid is formic acid, said second organic acid is propionic acid, and said acidulant is phosphoric acid.

Claim 19 (previously withdrawn). The composition of claim 18 wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is from about 5% to about 20% of the sum of the 2-hydroxy-4-(methylthio)butanoic acid, formic acid, propionic acid, and phosphoric acid content;

the content of the formic acid is from about 65% to about 85% of said sum;

the content of the propionic acid is from about 1% to about 15% of said sum; and

the content of the phosphoric acid is from about 5% to about 20% of said sum.

Claim 20 (previously withdrawn). The composition of claim 19 wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is about 10% of said sum;

the content of the formic acid is about 75% of said sum; the content of the propionic acid is about 5% of said sum; and the content of the phosphoric acid is about 10% of said sum.

Claim 21 (previously withdrawn). The composition of claim 18 wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is from about 20% to about 40% of the sum of the 2-hydroxy-4-(methylthio)butanoic acid, formic acid, propionic acid, and phosphoric acid content;

the content of the formic acid is from about 45% to about 65% of said sum;

the content of the propionic acid is from about 1% to about 20% of said sum; and

the content of the phosphoric acid is from about 1% to about 15% of said sum.

Claim 22 (previously withdrawn). The composition of claim 21 wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is about 30% of said sum;

the content of the formic acid is about 55% of said sum; the content of the propionic acid is about 10% of said sum; and the content of the phosphoric acid is about 5% of said sum.

Claim 23 (previously withdrawn). The composition of claim 17 wherein said first organic acid is butyric acid, said second organic acid is lactic acid, and said acidulant is phosphoric acid.

Claim 24 (previously withdrawn). The composition of claim 23 wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is from about 20% to about 40%

of the sum of the 2-hydroxy-4-(methylthio)butanoic acid, butyric acid, lactic acid, and phosphoric acid content;

the content of the butyric acid is from about 10% to about 30% of said sum;

the content of the lactic acid is from about 10% to about 30% of said sum; and

the content of the phosphoric acid is from about 20% to about 40% of said sum.

Claim 25 (previously withdrawn). The composition of claim 24 wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is about 30% of said sum;

the content of the butyric acid is about 20% of said sum; the content of the lactic acid is about 20% of said sum; and the content of the phosphoric acid is about 30% of said sum.

Claim 26 (previously withdrawn). The composition of claim 23 wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is from about 20% to about 40% of the sum of the 2-hydroxy-4-(methylthio)butanoic acid, butyric acid, lactic acid, and phosphoric acid content;

the content of the butyric acid is from about 5% to about 25% of said sum; the content of the lactic acid is from about 10% to about 30% of said sum;

the content of the phosphoric acid is from about 25% to about 45% of said sum.

and

Claim 27 (withdrawn). The composition of claim 26 wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is about 30% of said sum;

the content of the butyric acid is about 15% of said sum; the content of the lactic acid is about 20% of said sum; and the content of the phosphoric acid is about 35% of said sum.

Claim 28 (previously withdrawn). The composition of claim 16 further comprising a third organic acid selected from the group consisting of formic acid, acetic acid, propionic acid, butyric acid, benzoic acid, lactic acid, malic acid, tartaric acid, mandelic acid, citric acid, fumaric acid, sorbic acid, boric acid, succinic acid, adipic acid, glycolic acid, and glutaric acid.

Claim 29 (previously withdrawn). The composition of claim 28 wherein said first organic acid is butyric acid, said second organic acid is formic acid, said third organic acid is lactic acid, and said acidulant is phosphoric acid.

Claim 30 (previously withdrawn). The composition of claim 29 wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is from about 10% to about 30% of the sum of the 2-hydroxy-4-(methylthio)butanoic acid, butyric acid, formic acid, lactic acid, and phosphoric acid content;

the content of the butyric acid is from about 2% to about 22% of said sum; the content of the formic acid is from about 20% to about 40% of said sum;

the content of the lactic acid is from about 8% to about 28% of said sum; and

the content of the phosphoric acid is from about 10% to about 30% of said sum.

Claim 31 (previously withdrawn). The composition of claim 30 wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is about 20% of said sum;

the content of the butyric acid is about 12% of said sum; the content of the formic acid is about 30% of said sum; the content of the lactic acid is about 18% of said sum; and the content of the phosphoric acid is about 20% of said sum.

Claim 32 (previously withdrawn). The composition of claim 28 wherein said first organic acid is butyric acid, said second organic acid is lactic acid, said third organic acid is propionic acid, and said acidulant is phosphoric acid.

Claim 33 (previously withdrawn). The composition of claim 32 wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is from about 10% to about 30% of the sum of the 2-hydroxy-4-(methylthio)butanoic acid, butyric acid, lactic acid, propionic acid, and phosphoric acid content;

the content of the butyric acid is from about 2% to about 22% of said sum; the content of the lactic acid is from about 8% to about 28% of said sum; the content of the propionic acid is from about 20% to about 40% of said sum; and

the content of the phosphoric acid is from about 10% to about 30% of said sum.

Claim 34 (previously withdrawn). The composition of claim 33 wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is about 20% of said sum;

the content of the butyric acid is about 12% of said sum; the content of the lactic acid is about 18% of said sum; the content of the propionic acid is about 30% of said sum; and the content of the phosphoric acid is about 20% of said sum.

Claim 35 (previously withdrawn). The composition of claim 28 wherein said first organic acid is butyric acid, said second organic acid is formic acid, said third organic acid is propionic acid, and said acidulant is phosphoric acid.

Claim 36 (previously withdrawn). The composition of claim 35 wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is from about 1% to about 20% of the sum of the 2-hydroxy-4-(methylthio)butanoic acid, butyric acid, formic acid, propionic acid, and phosphoric acid content;

the content of the butyric acid is from about 1% to about 15% of said sum; the content of the formic acid is from about 65% to about 85% of said sum;

the content of the propionic acid is from about 1% to about 15% of said sum; and

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the content of the phosphoric acid is from about 1% to about 15% of said sum.

Claim 37 (previously withdrawn). The composition of claim 36 wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is about 10% of said sum;

the content of the butyric acid is about 5% of said sum; the content of the formic acid is about 75% of said sum; the content of the propionic acid is about 5% of said sum; and the content of the phosphoric acid is about 5% of said sum.

Claim 38 (previously withdrawn). The composition of claim 12 further comprising a second organic acid, wherein said first organic acid and said second organic acid are independently selected from the group consisting of formic acid, propionic acid, butyric acid, and lactic acid.

Claim 39 (previously withdrawn). The composition of claim 38 wherein said first organic acid is formic acid and said second organic acid is propionic acid.

Claim 40 (previously withdrawn). The composition of claim 39 wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is from about 20% to about 40% of the sum of the 2-hydroxy-4-(methylthio)butanoic acid, formic acid, and propionic acid content;

the content of the formic acid is from about 40% to about 60% of said sum; and

the content of the propionic acid is from about 10% to about 30% of said sum.

Claim 41 (previously withdrawn). The composition of claim 40 wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is about 30% of said sum;

the content of the formic acid is about 50% of said sum; and the content of the propionic acid is about 20% of said sum. Claim 42 (previously withdrawn). A composition comprising a compound of Formula I and an acidulant, wherein said compound of Formula I has the following structure:

$$R^1$$
  $S$   $(CH_2)_n$   $OH$ 

wherein R<sup>1</sup> is an alkyl group having from one to four carbon atoms;

n is an integer from 0 to 2;

R<sup>2</sup> is selected from the group consisting of hydroxy, amino,

--OCOR3, or --NHCOR3; and

R<sup>3</sup> is an organic acid derivative;

or a salt thereof;

and an acceptable diluent, adjuvant or excipient;

wherein said acidulant is selected from the group consisting of mineral acids.

Claim 43 (previously withdrawn). The composition of claim 42 wherein said organic acid derivative is derived from an organic acid selected from the group consisting of formic acid, acetic acid, propionic acid, butyric acid, benzoic acid, lactic acid, malic acid, tartaric acid, mandelic acid, citric acid, fumaric acid, sorbic acid, boric acid, succinic acid, adipic acid, glycolic acid, and glutaric acid, or mixtures thereof.

Claim 44 (previously withdrawn). The composition of claim 43 wherein said acidulant is selected from the group consisting of phosphoric acid, sulfuric acid, phosphorous acid, hydrochloric acid, hydrobromic acid, and nitric acid.

Claim 45 (previously withdrawn). The composition of claim 44 wherein the content of the 2-hydroxy-4-(methylthio)butanoic acid is from about 5% to about

50% of the sum of the 2-hydroxy-4-(methylthio)butanoic acid and acidulant content.

Claim 46 (previously withdrawn). The composition of claim 45 wherein the content of the 2-hydroxy-4-(methylthio)butanoic acid is about 5% of said sum.

Claim 47 (previously withdrawn). The composition of claim 45 wherein the content of the 2-hydroxy-4-(methylthio)butanoic acid is about 25% of said sum.

Claim 48 (previously withdrawn). The composition of claim 45 wherein the content of the 2-hydroxy-4-(methylthio)butanoic acid is about 45% of said sum.

Claim 49 (previously withdrawn). A combination comprising a compound of Formula I and one or more other organic acids, wherein said compound of Formula I has the following structure:

$$R^{1}$$
  $S$   $(CH_{2})_{n}$   $OH$   $I$ 

wherein R<sup>1</sup> is an alkyl group having from one to four carbon atoms;

n is an integer from 0 to 2;

R<sup>2</sup> is selected from the group consisting of hydroxy, amino,

--OCOR3, or --NHCOR3; and

R<sup>3</sup> is an organic acid derivative;

or a salt thereof;

and an acceptable diluent, adjuvant or excipient.

Claim 50 (previously withdrawn). The combination of claim 49 wherein said organic acid derivative is derived from an organic acid having at least one carboxyl moiety and having a pK<sub>a</sub> of less than about 5.5.

Claim 51 (previously withdrawn). The combination of claim 50 wherein said organic acid derivative is derived from an organic acid selected from the group

consisting of formic acid, acetic acid, propionic acid, butyric acid, benzoic acid, lactic acid, malic acid, tartaric acid, mandelic acid, citric acid, fumaric acid, sorbic acid, boric acid, succinic acid, adipic acid, glycolic acid, and glutaric acid, or combinations thereof.

Claim 52 (previously withdrawn). The combination of claim 51 wherein said other organic acid is an organic acid having at least one carboxyl moiety and having a  $pK_a$  of less than about 5.5.

Claim 53 (previously withdrawn). The combination of claim 52 wherein said other organic acid is selected from the group consisting of formic acid, acetic acid, propionic acid, butyric acid, benzoic acid, lactic acid, malic acid, tartaric acid, mandelic acid, citric acid, fumaric acid, sorbic acid, boric acid, succinic acid, adipic acid, glycolic acid, and glutaric acid, or combinations thereof.

Claim 54 (previously withdrawn). The combination of claim 53 wherein said compound of Formula I is 2-hydroxy-4-(methylthio)butanoic acid, or a salt, ester or amide thereof.

Claim 55 (previously withdrawn). The combination of claim 49 comprising 2-hydroxy-4-(methylthio)butanoic acid, or a salt, ester or amide thereof; and

a first organic acid selected from the group consisting of formic acid, propionic acid, butyric acid, and lactic acid.

Claim 56 (previously withdrawn). The combination of claim 55 further comprising an acidulant selected from the group consisting of phosphoric acid, sulfuric acid, phosphorous acid, hydrochloric acid, hydrobromic acid, and nitric acid.

Claim 57 (previously withdrawn). The combination of claim 56 further comprising a second organic acid selected from the group consisting of formic acid, propionic acid, butyric acid, and lactic acid.

Claim 58 (previously withdrawn). The combination of claim 57 wherein said first organic acid is formic acid, said second organic acid is propionic acid, and said acidulant is phosphoric acid.

Claim 59 (previously withdrawn). The combination of claim 57 wherein said first organic acid is butyric acid, said second organic acid is lactic acid, and said acidulant is phosphoric acid.

Claim 60 (previously withdrawn). The combination of claim 57 further comprising a third organic acid selected from the group consisting of formic acid, propionic acid, butyric acid, and lactic acid.

Claim 61 (previously withdrawn). The combination of claim 60 wherein said first organic acid is butyric acid, said second organic acid is formic acid, said third organic acid is lactic acid, and said acidulant is phosphoric acid.

Claim 62 (previously withdrawn). The combination of claim 60 wherein said first organic acid is butyric acid, said second organic acid is lactic acid, said third organic acid is propionic acid, and said acidulant is phosphoric acid.

Claim 63 (previously withdrawn). The combination of claim 60 wherein said first organic acid is butyric acid, said second organic acid is formic acid, said third organic acid is propionic acid, and said acidulant is phosphoric acid.

Claim 64 (previously withdrawn). The combination of claim 55 further comprising a second organic acid selected from the group consisting of formic acid, propionic acid, butyric acid, and lactic acid.

Claim 65 (previously withdrawn). The combination of claim 64 wherein said first organic acid is formic acid and said second organic acid is propionic acid.

Claim 66 (previously withdrawn). A combination comprising a compound of Formula I and an acidulant, wherein said compound of Formula I has the following structure:

$$R^1$$
  $S$   $(CH_2)_n$   $OH$   $I$ 

wherein R<sup>1</sup> is an alkyl group having from one to four carbon atoms; n is an integer from 0 to 2;

R<sup>2</sup> is selected from the group consisting of hydroxy, amino, --OCOR<sup>3</sup>, or --NHCOR<sup>3</sup>; and

R<sup>3</sup> is an organic acid derivative;

or a salt thereof;

and an acceptable diluent, adjuvant or excipient;

wherein said acidulant is selected from the group consisting of phosphoric acid, sulfuric acid, phosphorous acid, hydrochloric acid, hydrobromic acid, and nitric acid.

Claim 67 (previously withdrawn). The combination of claim 66 wherein said organic acid derivative is derived from an organic acid selected from the group consisting of formic acid, propionic acid, butyric acid, and lactic acid.

Claim 68 (previously withdrawn). The combination of claim 67 wherein the content of the compound of Formula I is from about 5% to about 50% of the sum of the compound of Formula I and acidulant content.

Claim 69 (previously withdrawn). An animal feed composition comprising a compound of Formula I and one or more other organic acids, wherein said compound of Formula I has the following structure:

$$R^{1}$$
  $S$   $(CH_{2})_{n}$   $OH$   $I$ 

wherein R<sup>1</sup> is an alkyl group having from one to four carbon atoms;

n is an integer from 0 to 2;

R<sup>2</sup> is selected from the group consisting of hydroxy, amino, --OCOR<sup>3</sup>, or --NHCOR<sup>3</sup>; and

R<sup>3</sup> is an organic acid derivative;

or a salt thereof; and

an acceptable diluent, adjuvant or excipient.

Claim 70 (previously withdrawn). The composition of claim 69 comprising 2-hydroxy-4-(methylthio)butanoic acid, or a salt, ester or amide thereof; and

a first organic acid selected from the group consisting of formic acid, propionic acid, butyric acid, and lactic acid.

Claim 71 (previously withdrawn). The composition of claim 70 further comprising an acidulant selected from the group consisting of phosphoric acid, sulfuric acid, phosphorous acid, hydrochloric acid, hydrobromic acid, and nitric acid.

Claim 72 (previously withdrawn). The composition of claim 71 further comprising a second organic acid selected from the group consisting of formic acid, propionic acid, butyric acid, and lactic acid.

Claim 73 (previously withdrawn). The composition of claim 70 further comprising a second organic acid selected from the group consisting of formic acid, propionic acid, butyric acid, and lactic acid.

Claim 74 (previously withdrawn). An animal feed composition comprising a compound of Formula I and an acidulant, wherein said compound of Formula I has the following structure:

$$R^{1}$$
  $S$   $(CH_{2})_{n}$   $OH$ 

wherein R<sup>1</sup> is an alkyl group having from one to four carbon atoms;

n is an integer from 0 to 2;

R<sup>2</sup> is selected from the group consisting of hydroxy, amino, --OCOR<sup>3</sup>, or --NHCOR<sup>3</sup>; and

R<sup>3</sup> is an organic acid derivative;

or a salt thereof;

and an acceptable diluent, adjuvant or excipient; wherein said acidulant is selected from the group consisting of phosphoric acid, sulfuric acid, phosphorous acid, hydrochloric acid, hydrobromic acid, and nitric acid.

Claim 75 (presently amended). A method of inhibiting or killing microbes in food or water, the method comprising treating the food or water with a composition, the composition comprising at least two organic acids selected from the group consisting of formic acid, butyric acid, fumaric acid, lactic acid, benzoic acid, and propionic acid; and a compound of formula (I) having the following structure:

$$R^{1}$$
  $S$   $(CH_{2})_{n}$   $OH$   $I$ 

wherein R<sup>1</sup> is an alkyl group having from one to four carbon atoms;

n is an integer from 0 to 2;

R<sup>2</sup> is selected from the group consisting of hydroxy, amino,

--OCOR<sup>3</sup>, or --NHCOR<sup>3</sup>; and

R<sup>3</sup> is an organic acid derivative;

or a salt thereof [[;]].

and an acceptable diluent, adjuvant or excipient.

Claim 76 (cancelled).

Claim 77 (previously amended). The method of claim 75 wherein said food is selected from the group consisting of human food, livestock food, pet food, or aquaculture food.

Claim 78 (original). The method of claim 77 wherein said composition is mixed with the food as it is formulated.

Claim 79 (original). The method of claim 78 wherein said composition is applied to a pre-mixed or pre-pelleted feed.

Claim 80 (original). The method of claim 79 wherein said composition, subsequent to treating said food, is uniformly dispersed throughout said food.

Claim 81 (previously amended). The method of claim 75 wherein said food comprises a meat or bone meal.

Claim 82 (previously amended). The method of claim 75 wherein said food is dry food.

Claim 83 (previously amended). The method of claim 75 wherein said food is liquid food.

Claim 84 (previously amended). The method of claim 75 wherein said food is a combination of dry feed and liquid food.

Claim 85 (previously amended). The method of claim 75 wherein said food is fed to an animal.

Claim 86 (original). The method of claim 85 wherein said animal is a ruminant animal.

Claim 87 (original). The method of claim 86 wherein said ruminant animal is selected from the group consisting of dairy cows, lactating dairy cows, dairy calves, beef cattle, sheep, and goats.

Claim 88 (original). The method of claim 85 wherein said animal is an aquaculture.

Claim 89 (original). The method of claim 88 wherein said aquaculture is fish or crustaceans.

Claim 90 (original). The method of claim 85 wherein said animal is livestock.

Claim 91 (original). The method of claim 90 wherein said livestock is swine or horses.

Claim 92 (original). The method of claim 85 wherein said animal is poultry.

Claim 93 (original). The method of claim 92 wherein said poultry is selected from the group consisting of chickens, turkeys, and hatchlings thereof.

Claim 94 (original). The method of claim 85 wherein said animal is a companion animal.

Claim 95 (original). The method of claim 94 wherein said companion animal is a dog or a cat.

Claim 96 (original). The method of claim 75 wherein said microbe is a bacterium.

Claim 97 (original). The method of claim 75 wherein said microbe is a mold.

Claim 98 (presently amended). A method of killing mold in food or water comprising corn and soy, the method comprising apply to said food or water a composition, the composition comprising at least two organic acids selected from the group consisting of formic acid, butyric acid, fumaric acid, lactic acid, benzoic acid, and propionic acid; and a compound of formula (I) having the following structure:

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$$R^{1}$$
  $S$   $(CH_{2})_{n}$   $OH$   $I$ 

wherein R<sup>1</sup> is an alkyl group having from one to four carbon atoms;

n is an integer from 0 to 2;

R<sup>2</sup> is selected from the group consisting of hydroxy, amino,

--OCOR3, or --NHCOR3; and

R<sup>3</sup> is an organic acid derivative;

or a salt thereof [[;]].

and an acceptable diluent, adjuvant or excipient.

Claim 99 (presently amended). A method of killing mold in food having a moisture content of from 0-17%, the method comprising applying to said food a composition, the composition comprising at least two organic acids selected from the group consisting of formic acid, butyric acid, fumaric acid, lactic acid, benzoic acid, and propionic acid; and a compound of formula (I) having the following structure:

$$R^{1}$$
  $S$   $(CH_{2})_{n}$   $OH$   $I$ 

wherein R<sup>1</sup> is an alkyl group having from one to four carbon atoms;

n is an integer from 0 to 2;

R<sup>2</sup> is selected from the group consisting of hydroxy, amino,

--OCOR3, or --NHCOR3; and

R<sup>3</sup> is an organic acid derivative;

or a salt thereof [[;]].

and an acceptable diluent, adjuvant or excipient.

Claim 100 (original). The method of claim 99 wherein said moisture content is at least 0.01% by weight of the food.

Claim 101 (original). The method of claim 99 wherein said moisture content is at least 1% by weight of the food.

Claim 102 (original). The method of claim 99 wherein said moisture content is at least 5% by weight of the food.

Claim 103 (original). The method of claim 99 wherein said moisture content is at least 10% by weight of the food.

Claim 104 (presently amended). The method of claim 75 wherein said animal the food is heat-treated, either before or after application of said composition.

Claim 105-112 (cancelled).

Claim 113 (previously added). The method of claim 75, wherein the compound of Formula I is 2-hydroxy-4-(methylthio)butanoic acid.

Claim 114 (previously added). The method of claim 113, further comprising an acidulant selected from the group consisting of phosphoric acid, sulfuric acid, phosphorous acid, hydrochloric acid, hydrobromic acid, and nitric acid.

Claim 115 (previously added). The method of claim 113, wherein the composition has a pH of less than about 5.

Claim 116 (previously added). The method of claim 113, wherein the composition has a pH of about 4 to about 5.

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Claim 117 (previously added). The method of claim 113, wherein the composition has a pH of about 4.5.

Claim 118 (previously added). The method of claim 75, wherein the compound of Formula I is 2-hydroxy-4-(methylthio)butanoic acid; and the organic acids consist of formic acid and propionic acid

Claim 119 (previously added). The method of claim 118, wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is from about 5% to about 20% of the sum of the 2-hydroxy-4-(methylthio)butanoic acid, formic acid, and propionic acid content; the content of the formic acid is from about 65% to about 85% of said sum; and the content of the propionic acid is from about 1% to about 15% of said sum.

Claim 120 (previously added). The method of claim 119, further comprising phosphoric acid, wherein the content of the phosphoric acid is from about 5% to about 20% of said sum.

Claim 121 (previously added). The method of claim 75, wherein the compound of Formula I is 2-hydroxy-4-(methylthio)butanoic acid; and the organic acids consist of butyric acid, and lactic acid.

Claim 122 (previously added). The method of claim 121, wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is from about 20% to about 40% of the sum of the 2-hydroxy-4-(methylthio)butanoic acid, butyric acid, and lactic acid content; the content of the butyric acid is from about 10% to about 30% of said sum; and the content of the lactic acid is from about 10% to about 30% of said sum.

Claim 123 (previously added). The method of claim 122, further comprising phosphoric acid, wherein the content of the phosphoric acid is from about 20% to about 40% of said sum.

Claim 124 (previously added). The method of claim 75, wherein the compound of Formula I is 2-hydroxy-4-(methylthio)butanoic acid; and the organic acids consist of butyric acid, formic acid, and lactic acid.

Claim 125 (previously added). The method of claim 124, wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is from about 10% to about 30% of the sum of the 2-hydroxy-4-(methylthio)butanoic acid, butyric acid, formic acid, and lactic acid content; the content of the butyric acid is from about 2% to about 22% of said sum; the content of the formic acid is from about 20% to about 40% of said sum; and the content of the lactic acid is from about 8% to about 28% of said sum.

Claim 126 (previously added). The method of claim 125, further comprising phosphoric acid, wherein the content of the phosphoric acid is from about 10% to about 30% of said sum.

Claim 127 (previously added). The method of claim 75, wherein the compound of Formula I is 2-hydroxy-4-(methylthio)butanoic acid; and the organic acids consist of butyric acid, lactic acid, and propionic acid.

Claim 128 (previously added). The method of claim 127, wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is from about 10% to about 30% of the sum of the 2-hydroxy-4-(methylthio)butanoic acid, butyric acid, lactic acid, and propionic acid content; the content of the butyric acid is from about 2% to about 22% of said sum; the content of the lactic acid is from about 8% to about 28% of said sum; and the content of the propionic acid is from about 20% to about 40% of said sum.

Claim 129 (previously added). The method of claim 128, further comprising phosphoric acid, wherein the content of the phosphoric acid is from about 10% to about 30% of said sum.

Claim 130 (previously added). The method of claim 75, wherein the compound of Formula I is 2-hydroxy-4-(methylthio)butanoic acid; and the organic acids consist of butyric acid, formic acid, and propionic acid.

Claim 131 (previously added). The method of claim 130, wherein the content of 2-hydroxy-4-(methylthio)butanoic acid is from about 1% to about 20% of the sum of the 2-hydroxy-4-(methylthio)butanoic acid, butyric acid, formic acid, and propionic acid content; the content of the butyric acid is from about 1% to about 15% of said sum; the content of the formic acid is from about 65% to about 85% of said sum; and the content of the propionic acid is from about 1% to about 15% of said sum.

Claim 132 (previously added). The method of claim 131, further comprising phosphoric acid, wherein the content of the phosphoric acid is from about 1% to about 15% of said sum.

Claim 133 (previously added). The method of claim 113, wherein the composition has an improved odor.

Claim 134 (new). The method of claim 127; wherein the microbe is Salmonella.

Claim 135 (new). The method of claim 75, wherein the compound of Formula I is 2-hydroxy-4-(methylthio) butanic acid; and the organic acids consist of lactic acid and propionic acid.

Claim 136 (new). The method of claim 135, wherein the microbe is Salmonella.